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SPECIAL SECTION ARTICLE

Mentoring: What Is It? How Do We Do It and How Do We Get More Of It?

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SEEKING A DEFINITION

Although mentoring is something most of us talk about doing and needing on a regular basis, it isn't obvious what being a mentor means, precisely, or what the process of mentoring entails. Is it the same as training? teaching? advising? Is being a mentor the same as being a good role model? Are these all labels for the same thing?

Having agreed to talk about mentoring at this event in honor of Harold Luft, I did what any good researcher of today would do—I *googled* the term. I discovered that there are a fair number of websites out there dedicated to the topic. The term is used by organizations that focus on youth mentoring, including an organization called Mentor that stresses “Expanding the world of quality mentoring,” as well as those promoting business mentoring, and, something more familiar to many of us, academic mentoring.¹ Further evidence that this is a global concept, there's even an International Mentoring Association.²

My search also revealed a large selection of books and articles with mentoring in the title (e.g., “Toward a Conceptualization of Mentoring,” Anderson and Shannon 1988) and even a software package offered by one business consulting firm called “Mentoring that Makes a Difference.”³ While not an exhaustive search, I was nonetheless amazed by the range of uses and lack of consensus out there about what mentoring is, much less how to do it and get

Editor's note: This essay is based on an invited presentation at a “Festschrift” held on September 18, 2008 to honor Harold S. Luft upon the occasion of his retiring as Director of the Philip R. Lee Institute for Health Policy Studies, School of Medicine, University of California, San Francisco. It has been altered slightly for publication at HSR. This essay honors Dr. Luft's roles as health economist.

more of it. One writer, in the official newsletter of the National Postdoctoral Association, opined “So what is mentoring? It seems to me that this is a very important and difficult question and one that is often answered with, “we will know it when we see it.” This isn’t very satisfying to those of us who are looking for good mentoring. If we can’t describe it, measure it or delineate it, then how can we find it?” (Wiest 2004).

While somewhat mollified that I was not the only one unsatisfied with my choices of definitions and applications, I tried to find consensus in another great source of knowledge, Wikipedia. According to Wikipedia, as well as over a dozen peer-reviewed journal articles I read, the word *mentor* itself was inspired by the character of Mentor in Homer’s *Odyssey*. When Odysseus left for the Trojan War he asked Mentor, an elderly friend, to serve as a counselor to his son Telemachus. Thus, Mentor’s name has passed into our language as a shorthand term for “a wise and trusted teacher or counselor” (Webster 2001). As I read more, I soon discovered that if you go beyond these rather short, simple definitions, there are many perspectives on the definition of mentoring. Discussions about the value of and the need for mentoring occur in many different arenas, not just academia, but also in business, sports, and the arts.

In the interest of defining by example a time-honored tradition when words fail you, Wikipedia helpfully gave a list of some of the world’s most successful people who, according to Wikipedia, have benefited from having a mentor, someone who helped them advance their careers and build their networks, including⁴:

- business—Freddie Laker mentored Richard Branson
- politics—Aristotle mentored Alexander the Great
- film directing—Martin Scorsese mentored Oliver Stone at New York University
- music—Johann Christian Bach mentored Wolfgang Amadeus Mozart
- sports—Eddy Merckx mentored Lance Armstrong
- fantasy—Obi-wan Kenobi mentored Anakin Skywalker and his son Luke Skywalker

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Clearly mentoring is taking place in a wide range of fields. Furthermore, the concept has expanded. A mentor isn't always someone who has "been there, done that" before, who draws on his or her own experience to guide the younger less experienced person, but in some cases, a professional trained in coaching, who is guiding and advising people who are pursuing a wide range of goals and careers. In recent years, especially in the management and human resources literature, there are consultants whose job is to advise members of the business community on the mysteries of mentoring. As part of this new expanded view of mentoring as coaching, one can find lists of "mentoring quotes" from a wide range of people, including Churchill, Gandhi, Maya Angelou, and Dick Gregory, that can be used to motivate your mentee.⁵

Here are politicians, scientists, and artists serving, in a way, as "long distance" mentors for an entire field. It was becoming clear to me that I needed some structure, some boundaries. Given Hal's professional career, the work of the person being honored, the focus from here on out will be on mentoring in academic environments.

MENTORING IN ACADEME

As a general rule, there are three levels at which mentoring takes place in the academic environment: between faculty and students, usually graduate students; between faculty and postdoctoral fellows; and between senior faculty and junior faculty. In "Mentoring across the Professional Lifespan in Academic Geriatrics," Hazzard makes the case that mentoring never ends, with senior faculty being mentored by division heads, deans, and leaders in the field.

Doctoral Students

The doctoral student-faculty dyad fits very nicely into the view of an older, more experienced professional acting as guide and teacher of a less experienced person. An important distinction is often made between the academic advisor and the mentor (Creighton, Parks, and Creighton 2008). The advisor's job is to provide information on degree requirements and guidance on how to navigate the system, a job that does not have to be filled by a faculty member. In contrast, a mentor is seen as a role model, someone the student wants to emulate professionally, and therefore by necessity a faculty member. "While advising is a short-term process where the focus is on giving information and guidance to the learner, mentoring is a more intricate, long-term, one-on-one

relationship that goes well beyond simply providing information” (Galbraith 2003, p. 16).

This is a somewhat idealized version of mentoring, in which the academic mentor not only establishes a working relationship with a student, shepherding the student through the doctoral process to completion and preparing him or her to become a successful professional after graduation, but long after the student moves on, becomes a lifelong colleague and source of guidance. This concept of mentoring, entered into voluntarily and by choice, is not always consistent with observed faculty–student relationships. In some cases, the student does not choose the mentor; rather, as with an academic advisor, a mentor is assigned by a department head based on perceived alignment of research interests. How often they meet and what is expected in those meetings also varies, sometimes there is a very formal highly structured process; in other cases, it is much more varied and informal (Nettles and Millett 2006).

Postdoctoral Fellows

Postdoctoral education, which has played an important role in the academic research enterprise for over 100 years, has been the focus of many mentoring studies. Historically, postdoctoral positions have been most common in the bench sciences, where individual fellows are hand selected to work in the lab of a senior, prominent scientist, performing a significant portion of the research, augmenting the productivity of the faculty member, and learning more about appropriate research techniques. Again, there exists an idealized notion of the mentor and the mentee. In *Mentoring—The TAO of Giving and Receiving Wisdom*, Huang and Lynch (1995) talk about creating a safe space to give and receive knowledge, “giving your gift of wisdom and having it graciously appreciated and received by others who then carry the gift to all those within their sphere of influence.” Often, however, postdoctoral scholars are simply additional pairs of hired hands to perform research and do not receive guidance or additional training to prepare them for the job market, much less encourage them to graciously give that gift to others.

In the last 30 years, the number of postdoctoral positions has more than doubled (Committee on Postdoctoral Education 1998). There are over 40,000 positions in science, engineering, and health-related disciplines alone. Along with the growth in the number of positions has been a growing number of reports of dissatisfaction expressed by the fellows. In a survey of postdoctoral fellows supported by the National Institutes of Health (NIH), which funds a

large number of these fellowships, 25 percent of these fellows reported that they did not have a mentor (Wolfsberg et al. 1998). Half of those who reported having a mentor said that they met weekly with their mentor, but one-fifth met less than once a month. Clearly there is variation out there in what a post-doctoral mentor is and what the mentoring should entail.

Junior Faculty

Increasingly, there is attention paid to the role played by senior faculty acting as mentors for junior faculty. Here a distinction is made between mentoring and collegiality, which parallels the distinction between mentoring and advising. Virtually all new faculty desire collegiality, needing someone to tell them where the copier is, what committees do which tasks, and so on. Some junior faculty neither want nor need mentoring, perhaps because of a strong mentoring presence in a doctoral and postdoctoral program that has continued. And yet increasingly we see universities putting formal mentoring programs into place, with each new faculty member assigned a mentor. Over half of the programs studied in 17 institutions in “Exemplary Junior Faculty Mentoring Programs” required junior faculty to participate and assigned them to a senior person (Thomas 2005).

Less well recognized and seldom quantified are those informal voluntary mentoring relationships that cross institutional boundaries, the senior researcher who reaches out and offers advice to a junior researcher from another institution because of shared interests, or chance encounters. That’s actually how I first met Hal, an interaction that I doubt he remembers, but one that was very important to me. After finishing my Ph.D., I joined the faculty at Tufts University, where I was the only health economist. I started a project on HMOs and read numerous articles that informed and influenced my research by someone named Luft. I had my first research paper looking at the impact of HMOs on market costs accepted for presentation at an economics conference. In the course of my presentation, I mentioned the work by Luft several times, pointing out how my work addressed some issues he had not included. During the Q&A period, the moderator called on someone, saying “Hal, do you have a question?” I immediately blanched, thinking “Uh-oh, how many economists are there named Hal who would be asking me a question about HMOs?” I tried very hard to focus on his question and give a somewhat intelligent response. At the end of the session, he came up to the table, leaned forward, and said to me, “Keep it up. You’re on the right track.” He also gave me some advice on my model. I was thrilled by his encouragement and continued to

work on HMOs, telling myself (and others) several times, “Hal said I was doing this the right way.”

I am by no means alone in being a mentee of Hal. He has been the co-director or associate director of five different training programs, some of which have been going on for many years. Approximately 360 fellows have been at the Philip R. Lee Institute for Health Policy Studies at University of California-San Francisco (UCSF) under Hal’s leadership, and approximately 75 of them considered him their official mentor. Unknown numbers of junior faculty considered themselves mentored by him at UCSF. Furthermore, as evidenced by my own story, Hal has served as a mentor for an unknown number of people outside of UCSF.

ELEMENTS OF SUCCESSFUL MENTORING

One glance at Hal Luft’s list of publications and research projects makes it clear that his mentoring relationships have been productive, long lasting, and widespread. In part, then, the questions for our field are: What did Hal do as a mentor and how can we get more of it? Tempting as it may be to look simply at his mentoring history, as good researchers we know the dangers of extrapolating from a sample of one.

There are studies looking at all three mentoring situations commonly found in the academic environment, but none in the field of health services and health policy training. Some of the programs described do not translate very well into our multidisciplinary framework, but there were some common themes.

As noted before, there are two types of mentoring relationships: formal and informal. Informal relationships develop on their own between partners. Some researchers talk about “finding a kindred spirit” who can help the junior person navigate the system in addition to learning, or later enhancing, their research skills; someone to be a friend providing socioemotional support; a career guide enhancing professional development; a source of information; and an intellectual guide, even a patron who uses his or her power in the field to help advance the other’s career.

Formal mentoring, on the other hand, refers to assigned relationships, often associated with organizational mentoring programs. In well-designed formal mentoring programs, there are program goals, schedules, training (for mentors and mentees), and evaluation. In some of these highly structured programs, the mentor is someone from a different discipline, even a different

department, clearly not the model seen in bench science, considered by many the historical base of academic mentoring, but more akin to the coaching phenomenon seen in businesses.

For many observers, what has been historically an informal, unofficial, voluntary, mutually agreeable, and self-selected interaction between two people has become a program—an institutionalized strategy for trying to force what some observers think can only come about naturally. And, certainly, the idealized vision of the mentor devoting scarce time and energy to the mentee, and establishing a lifelong collegial relationship, almost certainly requires some kind of fit, both in terms of research interests and personal style.

Doctoral Students

In 2006, *Three Magic Letters: Getting to Ph.D.* by Nettles and Millett, was published, the result of a decade-long project in which more than 9,000 graduate students, enrolled at 21 top research universities, were surveyed, providing detailed information about their experiences. Among the findings:

- Although most professors consider that having or being a mentor is a natural part of graduate school, if not the essence of graduate school, more than 30 percent of all graduate students do not feel that they have a faculty mentor.
- Students rate their social interaction with faculty members as high in engineering, sciences, mathematics, and education—and relatively low in the social sciences and humanities.
- In rating the quality of academic interactions, students in the humanities think highly of their professors while those in the social sciences and in math and science are more critical.

The survey also demonstrated that a substantive mentoring relationship with a faculty member positively affects progress toward the degree and, more importantly, is significantly related to completion of the Ph.D. Therefore, it was particularly disturbing that they found significant, and negative, gaps in the experiences of minority and female graduate students—from admissions, to getting teaching or research assistant jobs, to publishing research while still in graduate school. In math and science, for example, half of the black students reported having a mentor, whereas three quarters of the white students did.

In this study and others, more important than whether there is a formal or informal mentoring process in place, doctoral students highlight frequency of contact as the factor most important to them. Several researchers found that

the length of the relationship and frequency of contacts were the most important determinants of perceived benefits from the mentor–student relationship (Boyle and Boice 1998). At the end of the day, most evaluators agreed that research productivity, which was heavily influenced by participation in a satisfactory mentoring relationship, is the most important measure of a successful doctoral education experience.

Postdoctoral Fellows

There have also been several surveys and studies of the mentoring of postdoctoral fellows. The results are very similar to those found for doctoral students. As mentioned earlier, the NIH survey found that 25 percent had no mentor (Wolfsberg et al. 1998). The National Postdoctoral Association, gathering data from over 7,600 postdoctoral fellows at 46 institutions, discovered wide variation in the selection of fellows, the assignment of mentors, and the structure of the mentoring process (Davis 2005). Repeating the findings for doctoral students by Nettles and Millett, this study and others found correlations between gender, race, and ethnicity and the presence of a strong mentoring relationship.

Junior Faculty

Although a more recent focus for research, there are also strongly held views about the need for and the structure of successful faculty mentoring. Again, there is sparse strong empirical research on the topic, but there are quite a few surveys and opinions. Boice (1992) argues that formal structured mentoring programs are more successful, but some studies have found that mentors and protégés alike view informal mentorships that develop spontaneously as more effective. In one study, only half of new faculty with assigned mentors were still involved in the relationship after 1 year, whereas all but one of the new faculty who had sought out a mentor were still engaged in that mentoring relationship (Bode 1999).

Regardless of whether the mentor was assigned or found, all studies agree that there are positive outcomes associated with junior faculty mentoring. One study used data from 430 faculty members at two research institutions and discovered that assistant professors with multiple sources of mentoring (both within and outside of their institutions) reported higher levels of both objective and subjective career success (Van Eck Peluchette and Jeanquart 2000). In these and other studies gender influenced both the presence of and the strength of the mentoring relationship. In Bode's study (1999),

men were much more likely to find a mentor than were women, who were more likely to have one assigned.

In part in response to research that shows women junior faculty having more difficulty finding a mentor, several universities have initiated mentoring programs solely for women junior faculty. In virtually all cases, the senior faculty mentor is also a woman, potentially reflecting the notion of mentor as “kindred spirit,” a role model who can help junior faculty navigate the sometimes stormy waters of academia (Aisenberg and Harrington 1988). As noted above, however, studies have shown that formal assigned mentoring dyads are less likely to continue beyond the initial year. It is unclear from reports on the structure and processes developed in over a dozen junior faculty mentoring programs what the durability of the resulting mentoring relationships was (Thomas 2005).

BARRIERS TO EFFECTIVE MENTORING

There is increasing evidence that mentoring makes a difference. Doctoral students in a mentoring relationship are more likely than those without a mentor to present papers at national conferences, publish articles while in school, and complete the program (Nettles and Millett 2006). Studies also show that not only are doctoral students who were mentored more satisfied with their graduate school experience, they are also more likely to become mentors themselves (Johnson 2002). Postdoctoral fellows who reported having a satisfactory mentoring relationship were more likely to be involved in successful research projects yielding multiple publications and to move on to tenure track positions at the end of the fellowship program. Junior women and minority faculty have higher dropout rates; limited evidence suggests that those with mentors are less likely to leave academics and more likely to achieve tenure.

In addition to increasing a protégé’s productivity, evidence also suggests that a mentor can open doors for a mentee, help him or her develop the necessary skills to progress within the system, and serve as a signal of ability (Kirchmeyer 2005). Controlling for gender, graduate school quality, department prestige, and number of publications, Kirchmeyer found a significant positive effect of having a mentor in predicting promotion for junior faculty. In some ways, as the mentee’s career advances, a mentor can evolve into a patron, helping the protégé to obtain research funding, invitations to confer-

ences, and participation on editorial boards and national review panels, in other words, to “punch the right tickets.”

The immediate question is: Given the evidence of the gains from mentoring at all levels, why don't we see more of it? In part, demands for research, teaching, and committee work—the more tangible, measurable, and expected activities—often discourage faculty from being available as mentors. In addition, in most cases, good mentoring does not just happen. Johnson (2002) lists the personality characteristics associated with being a good mentor—intelligent, caring, flexible, empathetic, and patient, as well as ethical, psychologically well-adjusted, and well-known as scholars and professionals. Wow! While for some faculty being a good mentor may come easily, for most of us it is an acquired talent, one that requires the faculty member to make an active decision and commitment, to be an “intentional mentor.”

Learning how to be a good mentor is time-consuming and unfortunately does not often bring with it professional prestige or reward. Mentoring for many of us is difficult work and rarely do universities and departments recognize or reward such behavior. In theory, seeing the success of a junior colleague is its own reward. And, in some cases, doctoral students, postdoctoral fellows, and junior colleagues can enhance our own productivity. In practice, that is not always the case. In fact, sometimes those who need our help and guidance the most are those who will require the most investment and pose the highest risk of little return.

In addition, there may not be sufficiently good matches between mentors and mentees for voluntary mentoring relationships to flourish. Surveys of doctoral students, postdoctoral fellows, and junior faculty all found a strong preference among female and minority men for mentors and advisers who are from their same groups. Similarly, faculty themselves are inclined to voluntarily engage in a mentoring relationship with those who remind them of themselves (Johnson 2002).⁶

Clearly, there needs to be some comfort level, some sense of familiarity, some shared and safe space for the mentoring relationship to be sustainable. Regardless of what the desire for matching gender, race, and ethnicity reflects, the number of women and minority doctoral students, postdoctoral fellows, and junior faculty is growing. In most fields, the majority of senior faculty are white men. It doesn't take sophisticated research methods to realize that the demand for matched mentors along gender, race, and ethnicity is particularly hard to fill for some young scholars, creating a vicious cycle: These students and junior researchers can't find what they consider to be

appropriate mentors, which potentially leads to lower completion and success rates and perpetuates the shortage of senior professionals from those population groups.

The disconnect between available mentors and potential mentees explains in part the move to more formal, structured, required mentoring programs at all levels. But formally assigning mentees to matched mentors also can result in the small number of women and minority faculty available to be mentors being asked to take on relatively larger burdens, leaving them with less time to produce the output that is rewarded—grants and publications. Citing two studies that found that matching the gender of mentor and protégé was less important to achieving a successful mentoring relationship than matching intellectual interests and professional career goals, Hazzard (1999, p. 1467) noted, “male mentors not only have much to give to women fellows and junior faculty, they also have the obligation to share the responsibility with their women colleagues of fulfilling the needs for mentoring of deserving, future faculty of both genders.”

CONCLUDING COMMENTS

Just as those of us in this field study the benefits of physicians listening to their patients, taking time to explain the diagnosis and treatment, and providing coordinated care, and just as we point to the lack of financial and professional recognition and prestige as barriers to these things occurring, so it is with academic mentoring. Organizational changes can be made (e.g., including evidence of successful mentoring in merit reviews and promotion decisions, offering reduced course loads) to encourage mentoring. Financial incentives can be put into place. Last year, in the American Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act, Congress approved the inclusion of payment to faculty mentors of NIH fellows.⁷ Institutions can establish an infrastructure for both mentors and mentees to obtain needed support, tools, and guidance. Doctoral and postdoctoral programs supported through the Agency for Healthcare Research and Quality (AHRQ) and postdoctoral scholars programs funded by the Robert Wood Johnson Foundation (RWJF) are ways external organizations can promote and support the development of institutional mentoring structures. However, in addition to external financial incentives and internal structural changes, there needs to be a move away from a view of mentoring as a

secondary duty to thinking of mentoring as a primary professional responsibility. To rethink, in essence, what it means to contribute to the field.

One of those many mentoring sites I found offered the following comment: "Often the people doing the most interesting science are not the best mentors." That's what makes Hal so special. Not only is he one of the best researchers in the field, doing some of the most interesting research, but he is also a wonderful mentor. He fully embraces the realization that when articles stop referencing your work as the standard and instead reference the work of a former doctoral student, postdoctoral fellow, or junior colleague, that's a sign of successful mentoring. It is also a contribution to the field that deserves our thanks and recognition.

Hal also understands the concept of mentoring over the life span. After that initial meeting at the start of my academic career, our paths crossed at multiple junctures. For many years we both participated in the RWJF Scholars in Health Policy Research Program, a postdoctoral program for recent Ph.D.s in economics, political science, and sociology. I was a senior associate editor of *HSR* while he was one of the editors. We worked together on an AHRQ research center. I benefited many times during those years from interactions with Hal, both observing (and learning from) his mentoring of others and directly receiving his advice and counsel. Hazzard tells the story of being at a conference, talking to a visionary giant in his field, a 90-year-old man, when a 77-year-old former student, also a prime leader in the field, approached him and said, "Paul, what should I consider for the next stage of my career?" (1999, p. 1467). It's impossible to predict now what advice I'll be seeking from Hal when he's 77 or 90, but I know that he will listen to me, ask pertinent questions, then help me figure out what is the best path for me to take. And that is my definition of a good mentor.

NOTES

1. <http://thementoringgroup.org/>, <http://www.mentoring.org/>, <http://www.mentoringgroup.com/>, <http://internships.info.nih.gov/mentor.html>
2. <http://www.mentoring-association.org/>
3. <http://www.mentoringgroup.com/html/feature.html>
4. <http://en.wikipedia.org/wiki/Mentor>
5. http://www.finestquotes.com/select_quote-category-Mentoring-page-0.htm
6. The actual Mentor in *The Odyssey* is a somewhat ineffective old man. The goddess Athena takes on his appearance in order to guide young Telemachus in his time of

difficulty. The preference of a male mentor for a male protégé is longstanding indeed.

7. <http://www.whitehouse.gov/omb/circulars/a021/a021.html>

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